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1.1 Prelude

The present world is fast changing from industrial world to information world. It requires speedy, accurate, ready and reliable information. A large amount of information is being generated every moment. Information has become a strategic raw material and a dominating factor in decision making and execution. Information is and will be a primordial need for each individual in this world. Information is regarded as “Life blood of society” and vital resource for national development.

Knowledge is becoming multidimensional, multidisciplinary and it is growing fast because of the information revolution. This revolution is spinning around the computing and communication tools which forms the backbone of information technology (IT). Knowledge and information coexist to complement and supplement each other with the support of I.T. This scenario has given rise to the new dimensions of knowledge that not only accelerates its growth but has also transformed the nature of its resources from the printed form to the electronic/digital form such as magnetic tapes, floppy disks, CD-ROM etc. With the emergence of INTERNET era a rapid phase of growth such as online databases, List Serves, discussion groups, electronic journals, etc have enriched the accessibility of information. The development of digital libraries, virtual libraries have further promoted library activities and have taken them beyond four walls.

However, there are libraries with rare collections which are the treasures of local heritage. They reflect the heritage and culture of the society. The information in these libraries is in variety of forms such as palm leaves, manuscripts, printed books etc. Preservation requirements of these library holdings are obviously different from those of libraries established during recent past. These libraries have special responsibility of preserving heritage and culture as it is the duty of all library staff, from the head of the library down to the last worker at the bottom to safeguard, protect and preserve the holdings in their libraries. Preservation measures have to be endorsed supported and encouraged from the most senior level to the most junior in the library. Those who are responsible for managing the library and maintaining the external and internal fabric of the building need to work closely with those who are responsible for the preservation of the collections. Preservation needs of a library
have to be considered in line with the social and political climate in which the organization operates. The organization’s purpose, collecting policies, and available resources also matter in preserving this wealth of resources.

Efforts have been made by some of these libraries to convert few rare materials in micro forms and in digital form. This kind of enormous shift in information storage and dissemination technology has called for dual responsibilities on the part of librarians. Firstly, to accept the change and adapt the concept of access to information rather than owning such information. This calls for developing technology base and digital library resources and facilitate users with access to information electronically. Secondly, take necessary steps not only to preserve existing print and non-print materials for future use but also promote for easy access to such information.

1.2. Library Collection: Need for Preservation & Conservation

Library collection generally contains a wide range of organic materials, including paper, cloth, animal skin, and adhesives, and modern media such as microforms, optical and magnetic discs, digital formats, photographs, and audio and visual media. The organic substances undergo a continual and inevitable natural ageing process. While measures can be taken to slow this deterioration by careful handling and providing a sympathetic environment, it is impossible to halt it altogether. The chemical and physical stability of library material also depends on the quality and processing of the raw products used in their manufacture together with the design and construction of the final artifact. Over the centuries, the pressures of mass production have reduced the material quality of what is received in libraries. Much of the paper stock manufactured after 1850 is highly acidic, becomes brittle, and will self-destruct in time. Binding techniques have been abbreviated for the sake of automation and many text-blocks are now held together solely by adhesive. In fact, all books and, in particular, leather bindings, are far more susceptible to damage. Though these documents have inherent preservation problems they need to be stored and used carefully if they are not to perish prematurely. Thus two major problems confront a librarian seeking a pre 1900 book are durability and scarcity. A book printed from the
mid-1800s on is probably made of acid paper, bound in a machine-made case and very fragile.

Preservation of information is an idea whose time has come. Preservation and conservation (PAC) are related activities, relevant in library and information centers (LICs). If considered at all, they were deemed to be the province of those who had the care of rare books and manuscripts. But during recent past the view of PAC has expanded to become an integral part of the much wider area of collection management and a vital element in the provision of access to information. If the particular medium, which records the information, has been allowed to decay and disappear, then access to it is impossible. This increased perception of the essential requirement of preservation is perhaps related to the ‘green revolution’ generally, global warming, pollution and the burning of fossil fuels. The World Environment Summits at Rio in 1992 and Kyoto in 1997 and numerous other events have all contributed to the growing awareness of the importance of preserving and conserving the physical environment; some of this concern has percolated into the thinking of library and information managers (LIMs) who are concerned with access to information and its provision to their users.

There are, of course, more specific reasons than the general ‘greening’ of society for the heightened awareness of the need to preserve collections of information. An early one was the discovery of the ‘brittle books syndrome’. Most books printed after about 1850 and some even before that date were produced on paper which was chemically unstable and these books were literally crumbling into dust on the shelves of hundreds of libraries around the world. John Murray wrote to the Gentleman’s Magazine in 1823: “Allow me to call the attention of your readers to the present state of what wretched compound called paper. Every printer will corroborate my testimony; and I am only neglected and forgotten. It is a duty, however, of the most imperative description; - our beautiful Religion, our Literature, our Science, all are threatened.” (84) A good study was undertaken by the Harvard University Library Task Group on Collection Preservation Priorities (1991). The flood which devastated the city of Florence in 1966 caused enormous damage to the priceless documents in the Italian State Archives. Substantial donations of money
poured in, but it quickly became apparent that there were not sufficient numbers of trained conservators to undertake the highly skilled work required for restoration. Most of the damage was repaired eventually, but the disaster revealed a serious gap in the knowledge of preservation management and technique worldwide.

International Federation of Library Association (IFLA) (84) set up its core Preservation and Conservation Programme in 1984 as a logical continuation of the earlier programmes of Universal Bibliographic Control and Universal Availability of Publications. The programme is based at the Library of Congress (LC) and encourages research into different methods of preservation and the formulation of policy and strategy at national and international levels. The LC has published several comprehensive handbooks on practical preservation techniques and funded extensive research into the mass de-acidification of paper.

Ratcliffe Report (UK1984) (84) investigated preservation policies and conservation practices in British libraries. The British Library also set up the National Preservation Office (NPO) to provide a focus for preservation planning and co-operation. Ratcliffe was succeeded in widening the concern beyond the rarefied world of special collections and antiquarian materials by bringing awareness among those concerned and the public. It has lead to a number of subsequent studies.

France, Germany and Spain, have begun to put considerable emphasis on preservation and conservation in recent years. UNESCO has also turned its attention to these issues with the publication of two key documents, Guidelines on preservation and conservation policies in libraries and archives (Chapman, 1990 ) and Preservation and conservation of library documents: A UNESCO/IFLA/ICA enquiry into the current state of the World’s patrimony (Clements, 1987). The UNESCO’s ‘Memory of the World programme’ is yet another noteworthy effort concerning to preservation and conservation of heritage materials.

All these activities provide evidence of the serious problem of decaying and disappearing materials on a global scale. Hence, it is the challenge for library and information managers to translate this concern using the knowledge and techniques
available into a programme appropriate for the particular task and the information and materials which it wants and needs to preserve.

Preservation can only be successfully managed if it is perceived as a core task throughout the institution and if preservation experts are committed in all activities, including digitization initiatives undertaken in the name of access. It is of paramount importance that the preservation field keeps up the dialogue about the preservation of every initiative. They can bring a perspective of continuity to the discussion and make it clear that there is more to access than documents and images into tiffs and terabytes (LUSENET, 1999). (48)

1.3. Techniques Used for Preservation of Library Materials
Some of the techniques used to preserve rare materials are:

Chemical De-acidification

De-acidification merely arrests deterioration for a while, but if the book is already fragile, it remains so. From a collaborative perspective, if there are multiple copies of an old book scattered around library, it is likely to be cheaper to film or scan the best available copy once and then reproduce it, than to de-acidify all the copies. In addition microfilming creates a copying master and a bibliographic entry that provide broad access to the information. De-acidification can be done on an item-by-item basis at individual libraries. The cost of page-by-page paper treatment, by spraying a chemical fog on the page, is more than the cost of copying, even for one copy. The costs of these more elaborate preservation techniques which require disassembly and rebinding of each item, are basically prohibitive for books that do not have high value as artifacts. Paper preservation and individual book conservation, however, are the only technologies that preserve the original book itself.

Microfilming

Microfilming normally involves producing a roll film master, even if the final version of the book will be on fiche. Microfiche are not considered a preservation format, but can be produced from preservation roll film as an access medium. Microfiche can provide random access to a particular frame faster than roll film, and micro fiche reading machines are cheaper than microfilm reading machines.
Microfiche are accepted a medium of choice for a microform book catalogue. However, many readers dislike both micro film and microfiche.

**Digital imagery**

In digital imagery books are scanned into computer storage, which is a promising alternative process. Storing page images of books permits rapid transfer of books from library to library. The images can be displayed or printed, much as film images, although with greater cost today. Additionally, digital imagery permits considerable reprocessing: adjustment of contrast, adjustment of image size, and so on. Handling of these images requires special skills and equipment few libraries possess, but there is rapid technological progress in the design of disk drives, displays, and printing devices.

**ASCII (non-image)**

ASCII storage is much more compact; a page of text that will use a few hundred Kbytes in image form will contain only one to two thousand bytes of ASCII, or 1/100\(^{th}\) of the space. Other advantages of ASCII storage include the ability to reformat and reprint whole or partial documents easily; the ability to extract quotations or other subsections of the documents and include them in newer papers; and the ability to mechanically compare texts. Editing texts for later publication also needs ASCII rather than image storage. More applications such as feeding the texts to speech synthesizers to be read aloud are also possible; ASCII text can also be displayed on a wider variety of equipment and on cheaper equipment. ASCII displays can be formatted for the particular screen size or programme environment preferred by the user. The image quality shown does not reflect any fading or discoloration of the original.

**1.4. IT in Libraries, Archives and Museums**

The use of technology has become a core part of the institutional mission of museums, archives and libraries around the world. Computer based systems are now considered essential for many operational aspects of such institutions. These include collection management, of administrative databases and online catalogues; exhibit planning; and user services and outreach, including the provision of online catalogues.
and reference materials, as well as public service websites with general information about mission, collection and services.

In addition to the use of technology for administrative purposes, more institutions are facilitating the ‘added value’ of their collections by developing digitization surrogates, in an enhanced format that allows searching and browsing, to both traditional and new audiences via the internet. Institutions of all sizes particularly in developed countries have seen such services multiply since the development of the World Wide Web in 1989. Consequently, many have become ‘hybrid institutions’, with a mission to manage both analogue and digital cultural resources, and to support and anticipate the demands of their patrons for both traditional materials and new resources.

1.5. Digitization of Heritage Materials for Education & Research

Developing a digital surrogate of a rare or fragile original object can provide access to users while preventing the original document from damage by handling or display. This was the motivation behind the digitization of many priceless artifacts and such other valuable documents. Digitization of cultural heritage materials can have tremendous benefits for education. Many institutions in developed world host educational ‘modules’ on their websites, presenting ‘packages’ of educational materials based around their collections. Museums in developed countries have been particularly successful in this respect, as most organizations have in-house educational departments, which have been charged with developing materials that will exploit the potential of technology for delivering educational resources to all levels of learners. The Hunterian Museum at the University of Glasgow is proud of its digital collections being used by school children ‘from Barra to Brooklyn’ (www.hunterian.gla.ac.uk/). The New Museum of Contemporary Art’s Virtual Knowledge Project (www.newmuseum.org/) is an outreach programme that facilitates online discussions between museum staff, artists and schoolchildren around themes of contemporary art. Similarly, the Minneapolis Institute of Arts (www.artsmia.org) has put digital images of 5000 works from their collections online (out of 100,000 objects in the whole museum). These are organized thematically to allow in-depth study of
key ideas and concepts, such as ‘modernism’ and ‘myths and legends in art’ using items from the museum’s collection to develop teaching packages.

1.6. Need and Importance of the Present Study

The state of Karnataka is rich in its culture and tradition. It has some of the important libraries that possess old documents in the form of manuscripts, palm leaves and such other materials apart from print media. These documents contain rich information on Indian medicine, science and technology, linguistics and literature, art and culture and so on. Further, there are academic libraries including university libraries having rich collection of old reports, government publications and variety of other documents which need to be preserved for present use and for future generation. With exponential growth of literature due to information explosion, libraries are now tending to procure information in non-print media. But in practice, libraries in India are facing it hard to meet the challenges of this transitory period. The literature survey relating to studies on preservation and conservation of rare materials in India and more particularly in Karnataka hardly reveals any detailed study. Under the circumstances, it is felt necessary that a detailed study on rare materials containing rich information available in some selected libraries in Karnataka and the mode of their preservation and conservation for the use of present and future generation. Such a study not only unfolds hidden wealth of literature in different corners of the State but also gives way for preserving, maintaining and using this wealth of information for the development of the society and country as a whole.

For the purpose of the present study the investigator identified nine libraries in Karnataka possessing rare materials. These nine libraries are Oriental Research Institute Mysore; Divisional Archives Office, Govt of Karnataka, Mysore; Academy of Sanskrit Research, Melukote, Mandya; Kannada Research Institute KU, Dharwad; Karnataka Theological Library and Archives, Mangalore; Indian Council of Historical Bangalore; Mysore University Library Mysore; State Central Library Bangalore; City Central Library, Mysore;

These libraries have variety of valuable collections in different forms, such as manuscripts, palm leaves, out of print editions of printed books and journals, reports, proceeding of important meetings and so on.
Hence the investigator felt to study the Preservation and conservation of rare materials in select libraries in Karnataka. The study would trace out the importance of preservation and conservation of library rare materials and would give an impetus to the Libraries/Archives in Karnataka to properly preserve and organize special rare collections and services to users so that they will play greater role to preserve our cultural heritage tomorrow and thereby contribute indirectly in the task of nation building.

1.7. Statement of the Problem

The present study is conceived under the title “PRESERVATION AND CONSERVATION OF RARE MATERIALS IN SELECT LIBRARIES IN KARNATAKA: A STUDY.” The study aims to identify variety of rare materials in various libraries in Karnataka. There are some libraries in Karnataka possessing rare materials that reflect the heritage and culture of the society. These rare documents containing original information on yoga, herbal medicine, Ayurveda, astronomy, political philosophy and so on. The study is intended to know the kind of rare resources available in these libraries, how these are preserved, what are the future plans to preserving them for posterity, whether these are being used, is there demand for these resources, if so, who are the users, what is their subject and geographical background and so on. These factors become important in view of three important questions while considering preservation of rare materials. Firstly, the durability and scarcity of these materials. Secondly, the techniques & methods of preserving them & the cost involved. Thirdly, the amount of their usage. The present study is undertaken in the light of these questions in mind.

1.8. Definition of Concepts

The two concepts that figure in the present study are ‘preservation & conservation’ and ‘library rare materials’. These are discussed and defined here under:

**Preservation & Conservation**

From the ancient period itself, advocates for the protection of cultural artifacts, including books, primary source documents, and museum objects, used the terms ‘conservation’ and ‘preservation’ interchangeably. Today, preservation is an umbrella
term for the many policies and options for action, including conservation treatments. Preservation is the acquisition, organization, and distribution of resources to prevent further deterioration or renew the usability of selected groups of materials.

Technically speaking, the two terms “preservation and conservation” have different connotations though they are related to each other. Preservation generally means keeping an object away from harmful effects, such as loss damages, destructions and the like. On the other hand conservation focuses on three basic aspects, namely- examination, preservation and restoration. In other words, ‘Conservation’ is a broader concept of an activity of which ‘Preservation’ indicates one particular facet.

Thus, in common practice, ‘preservation’ deals with the maintenance aspect and conservation with the remedial treatment and restoration of the already damaged specimens. However, In the field of library and information science the terms Preservation and Conservation are used synonymously.

There are various definitions of preservation and conservation in the literature. The British Library National Preservation Office glossary (1992) provides comprehensive and appropriate definition of the terms preservation, conservation and restoration. According to this glossary:

**Preservation**: includes all the managerial and financial consideration including storage and accommodation provisions, staffing levels, policies, techniques and methods involved in preserving library archive materials and the information contained in them.

**Conservation**: denotes those specific treatments and techniques applied in protecting library and archive materials from deterioration which involves intervention with the object itself and

**Restoration**: is taken to mean the attempt to restore a damaged item to its original condition by careful imitation of materials and technique.

According to ALA Glossary of Library and Information Science (ALA 1983), the emerging distinction between conservation and preservation is that conservation
refers to the techniques and procedures relating to the treatment of books and other formats to maintain as much as possible their original physical integrity; while preservation includes conservation measures but also encompasses the techniques of partial preservation of the physical objects, such as rebinding, as well as the procedure for replacing the original by converting it to other formats preserving the intellectual content as much as possible.

The above said concepts of Conservation and Preservation are in the context of traditional library materials with the remedial treatment and restoration. In the present context the concept of preservation and conservation includes selection, deselection, computerization, conversion, maintenance, for speedy, accurate and ready use of resources by the information seekers and users of present, of future and of all the time to come.

**Rare Book**

According to Harrod’s Librarians’ Glossary and Reference book “Rare book is so old, scarce or difficult to find that it seldom appears in the book markets. Among rare books may be included: incunabula, sixteen to eighteen century imprints, first editions, limited and deluxe editions, specially illustrated editions, books in fine bindings, unique copies, books of interest for their associations (local, regional, subject etc.)”.

In the present context this definition is considered to mean the term rare materials. Thus it includes incunabula, manuscripts, palm leaves & such other materials, old edition books not available in the market, books in fine editions, unique documents such as office records, reports etc.

**1.9. Objectives of the Present Study**

The objectives of the present study are:

1. To examine rare materials in select libraries in Karnataka and study their worthiness/usefulness
2. To examine the present condition of preservation of these materials.
3. To assess the type of library rare materials that need to be preserved and posted for future use;
4. To study the availability of skilled manpower, their academic background experience in handling and preserving rare documents in different forms;
5. To find out the infrastructure facilities including equipment and other modern gadgets for facilitate them for future use;
6. To know the financial status for proper preservation and converting these traditional information sources into digital form; and
7. To suggest various means for preserving and conserving different forms of rare materials for easy access to users and to promote better usage of these materials.

1.10. Scope and Limitation of the Study

The geographical scope of the study is limited to the state of Karnataka. The study covers following nine libraries possessing rare materials:

1) Karnataka Theological Library & Archives Mangalore
2) Oriental Research Library in Mysore
3) State Central Library, Bangalore
4) City Central Library, Mysore
5) Mysore University Library, Mysore
6) Kannada Research Institute, Dharwad
7) Academy of Sanskrit Research, Melukote
8) Divisional Archives Office, Mysore
9) Indian Council of Historical Research, Bangalore

The present study excludes libraries attached to industrial sectors, business organizations, professional schools and such other institutions. The study primarily concentrates on rare reading materials including important out of print books.

1.11. Methodology and Sources of Data

The investigator combined survey method and observation method to collect primary data. The Sources for collection of primary data were original records, in house reports, questionnaire to heads of libraries/archives, questionnaire to users
supported by personal observation and interviews with heads of libraries and as well as select users.

The research started with literature survey. The LISA database from 1969-2006 was scanned to know the relevant studies carried on by scholars elsewhere. Internet and print resources were also used for this purpose. A select study of literature published on preservation and conservation of library materials is grouped 43 headings and presented in chapter-II

The investigator designed a questionnaire for the libraries under study and personally distributed them to the heads of respective libraries. Simultaneously the researcher visited each of these library and recorded bibliographical data of select rare documents available in these libraries.

There after, the researcher had personal interviews with the library staff to obtain valid data about preservation and related aspects. Following are the important issues on which data from the libraries was obtained.

1. Background information about libraries, their collection and infrastructural facility;
2. Objectives of parent institution;
3. Details about personnel in the library and their educational/professional background;
4. Details about users (internal & external) and the facilities extended to them;
5. Organization and maintenance of rare collection and the Tools and Techniques used for the same;
6. Techniques used for preserving and conserving rare documents;
7. Opinion of librarians about the usage of rare documents and the need for preservation for posterity;
8. Details of application IT if any for various purposes;
9. Initiatives for digitizing if any and the sources of finances;

The information so obtained was tabulated and analyzed. The bibliographical details of select references collected personally were also organized systematically.
Second questionnaire was designed to obtain opinion of users about rare materials in the libraries covered under study & their usage.

The user’s questionnaire contains questions relating to the following issues:

1. Users education & occupational background;
2. Acquaintance with library resources;
3. Use of library resources;
4. Use of rare documents;
5. Opinion about the importance & usability of rare documents and for posterity;

The having designed the questionnaire for users the investigator visited each library second time and personally distributed questionnaire to those users visiting the library. Select users were interviewed after receipt of filled in questionnaire, to validate the data. The total number of users to whom questionnaire was distributed and obtained in return is 561. Simultaneously, the investigator made observation study about use of rare documents, their handling, both by the staff and the users.

The data so recorded from the personal visits, observation, and that obtained through questionnaire from the users was tabulated analyzed and interpreted in the light of the study. Further the same is presented in the form of report.

1.12 Conspectus
The thesis is presented in the following five chapters

Chapter 1 gives an introduction to the topic of the research, its need and importance of study. It states the research problem and defines the concepts. It also presents the objectives and methodology of the study and its scope and limitations. Further it gives the summary of the remaining chapters.

Chapter 2 presents an overview of studies on preservation and conservation of library materials. It presents select studies carried or in India and as well abroad about preservation and conservation library materials and the developments in the use of information technology in preservation and conservation of important information resources. It also lists select rare materials
Chapter 3 gives a profile of the libraries covered under study, and the details of different type of document collection, infrastructural facilities, and the services provided by them.

Chapter 4 presents the primary data relating to rare documents in the libraries under study, the preservation techniques used, promotion activities undertaken, opinion of staff and of users about the importance and usability of these rare documents.

Chapter 5 presents summary of the findings based on the objectives of the study.

The bibliographical references are provided at the end of the thesis.